WE CLAIM

1.   A computer system programmed to process a large data set includes means for analysing the data set and means for applying a data compression technique to the analysed data set such that the compressed analysed data set has high fidelity in regions of interest and has lower fidelity in regions of lesser interest.

2.   A computer system as claimed in claim 1 wherein the data compression technique comprises the use of a wavelet compression technique.

3.   A computer system as claimed in claim 1 wherein the data compression technique produces high fidelity in geometric regions of interest at points in time of interest.

4.   A computer system has claimed in claim 3 wherein the geometric region has a rapid change in the stress field or has a high deformation rate.

5.   A computer system as claimed in claim 1 wherein the analysed data set comprises a 4D data set.

6.   A computer system as claimed in claim 1 wherein the analysed data set comprises an analysed data set of a fan blade containment analysis of a casing.

7.   A computer system as claimed in claim 1 wherein the means for analysing the data set comprises a means for finite element analysis.

8.   A computer system as claimed in claim 1 wherein the computer system comprises a local workstation and a graphical display is produced at the local workstation.

9.   A method for processing a large data set comprising analysing the data set and applying a data compression technique to the analysed data set such that the compressed analysed data set has high fidelity in regions of interest and has lower fidelity in regions of lesser interest.

10. A method as claimed in claim 9 wherein the data compression technique comprises using a wavelet compression technique.

11. A method as claimed in claim 9 wherein the data compression technique produces high fidelity in geometric regions of interest at points in time of interest.

12. A method as claimed in claim 11 wherein the geometric region has a rapid change in the stress field or has a high deformation rate.

13. A method as claimed in claim 9 wherein the analysed data set comprises a 4D data set.

14. A method as claimed in claim 9 wherein the analysed data set comprises an analysed data set of a fan blade containment analysis of a casing.

15. A method as claimed in claim 9 wherein the analysing of the data set comprises finite element analysis.

16. A method as claimed in claim 9 comprising producing a graphical display at a local workstation.

17. A computer system programmed to process a large data set includes means for applying a data compression technique to the data set and means for analysing the compressed data set such that the analysis has high fidelity in regions of interest and has lower fidelity in regions of lesser interest.

18. A computer system as claimed in claim 17 wherein the data compression technique comprises the use of a wavelet compression technique.

19. A computer system as claimed in claim 17 wherein the data compression technique allows the analysis to take place in high fidelity in geometric regions of interest at points of time of interest.

20. A computer system as claimed in claim 17 wherein the geometric region has a rapid change in the stress field or has a high deformation rate.

21.   A computer system as claimed in claim 17 wherein the data set comprises a 4D data set.

22.   A computer system as claimed in claim 17 wherein the data set comprises a data set of a fan blade containment analysis of a casing.

23.   A computer system as claimed in claim 17 wherein the means for analysing the compressed data set comprises a means for finite element analysis.

24.   A computer system as claimed in claim 17 wherein the computer system comprises a local workstation and a graphical display is produced at the local workstation.

25.   A method for processing large data sets comprising applying a data compression technique to the data set and analysing the compressed data set such that the analysis has high fidelity in regions of interest and has lower fidelity in regions of lesser interest.

26.   A method as claimed in claim 25 wherein the data compression technique comprises using a wavelet compression technique.

27.   A method as claimed in claim 25 wherein the data compression technique allows the analysis to take place in high fidelity in geometric regions of interest at points in time of interest.

28.   A method as claimed in claim 25 wherein the geometric region has a rapid change in the stress field or has a high deformation rate.

29.   A method as claimed in claim 25 comprising producing a graphical display at a local workstation.

30.   A method as claimed in claim 25 wherein the data set comprises a 4D data set.

31.   A method as claimed in claim 25 wherein the data set comprises a data set of a fan blade containment analysis of a casing.

32. A method as claimed in claim 25 wherein the analysing of the compressed data set comprises finite element analysis.